



US Army Corps
of Engineers®

Engineer Research and
Development Center

Capability/Service

Building Information Modeling Training and Support

Description

Building Information Modeling (BIM) is a 3-dimensional computer model that serves as a single repository for the drawing and database information traditionally associated with the design, construction, and maintenance of a building. Such graphical information as plans and elevations and nongraphical information as costs, specifications, schedules, and maintenance requirements are available from a single source. The ERDC Computer-Aided Design and Building Information Modeling Technology Center for Facilities, Infrastructure, and Environment (CAD/BIM Center) provides the expertise, standards, and onsite implementation support to execute BIM technology in the Federal design arena. The CAD/BIM Center is well-acquainted with the unique requirements of the Federal user including long-term management, operation, and maintenance of facilities in the Federal environment and the impact of the President's current Management Agenda.



Capabilities

The Center offers training and implementation support for this software to the Federal user community.

Supporting Technology

The A/E/C industry is becoming increasingly price conscious. In response the Federal Government is embracing automation tools that provide advanced design and build tools, on-line collaboration tools, and building life cycle management solutions to meet these challenges.

BIM is a commercially developed and distributed technology available from commercial vendors such as Autodesk, Bentley, and Graphisoft. BIM offers the ability to track unlimited information about a building. Historically, a door shown in a CAD application is nothing more than lines, arcs, and a text descriptor. A door in a BIM has associated intelligence. It carries information about its fire rating, construction, and glazing. It also knows how to display itself—one in a plan view, another in an elevation. In addition, it not only “knows” it belongs to a wall, it also knows if the fire rating of the wall matches its fire rating. A complete BIM can be used to evaluate building code compliance, generate quantity takeoffs, and generate specification documentation. BIM offers true “on-line collaboration” allowing offices across the country to design against a single model.

Benefits

Building information modeling supports the continuous and immediate availability of high-quality, reliable, integrated, and fully coordinated design data. Among the many competitive advantages it confers are:

- Increased speed of delivery (time saved)
- Better coordination (fewer errors)

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- Decreased costs (money saved)
- Greater productivity
- Higher quality work
- On-line collaboration
- New revenue and business opportunities in operations and functions

ERDC POC(s)

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